

**REMARKS**

**I. Status of the Claims**

Claims 9, 12, 15, 25, 36, 39, 52, 71, 73 and 74 are pending. Claims 10-11 and 13-14 have been cancelled in this amendment. Claim 9 has been amended to include “at least one oxidizing agent,” which was inadvertently omitted from claim 9 in the application as-filed. Support for this amendment is contained in the specification at page 5, lines 17-19. Claim 9 has also been amended to specifically claim “quaternized non-hydroxy celluloses” in addition to “quaternized hydroxyethylcelluloses.” While original claim 9 was directed to both non-hydroxy and hydroxy celluloses, as “quaternized celluloses” includes both, the claim language now explicitly makes that distinction. Applicants have also amended claim 9 to state that the groups contain “from 8 to 30 carbon atoms.” Support for this amendment can be found in claims 10 and 11 as originally filed. Claims 12, 25, and 71 have been amended to be in accord with independent claim 9, upon which they depend. Support for new claims 73 and 74 can be found respectively in claims 60 and 61, as originally filed. No new matter has been introduced by these amendments, nor do the amendments raise new issues or necessitate the undertaking of any additional search of the art by the Office. These amendments are made without prejudice or disclaimer, and Applicants expressly reserve the right to pursue the subject matter cancelled herein in a continuation application.

**II. Preliminary Matters**

Applicants thank the Office for noting that the cancellation of claim 9 was in error and agree with the Office that claim 9 should be treated as pending and examined in the present application.

**III. Rejections Under 35 U.S.C. § 112 Second Paragraph**

**A. Claims 9-15, 25, 36, 39, 52, and 71**

The Office has rejected claims 9-15, 25, 36, 39, 52, and 71 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. (Office Action, p. 2) Although claims 10, 11, 13 and 14 have been cancelled and claims 73 and 74 added, Applicants respectfully traverse this rejection insofar as it applies to the currently pending claims.

The Office alleges that the two choices in claim 9, “quaternized celluloses” and “quaternized hydroxyethylcelluloses” are “not mutually exclusive.” (Office Action at p. 2.) Although Applicants do not agree with the Office and believe that this language does not render the claims indefinite as the metes and bounds of the claims are clearly set forth as required (see, e.g., M.P.E.P. § 2173.05(d)), in the interest of advancing prosecution, Applicants have amended independent claim 9 to distinguish between “quaternized **non-hydroxy** celluloses” and “quaternized **hydroxyethylcelluloses**.”

The Office also alleges that “there is no nexus between the preamble and the body of the composition claim since there is no oxidizing component in the claimed

composition.” (Office Action, p. 2) Applicants have amended claim 9 to include at least one oxidizing agent.

The Office also alleges that the phrase “containing at least 8 carbon atoms,” as twice used in claim 9, is open-ended and renders the claim indefinite. While Applicants believe that the absence of an upper limit on the number of carbon atoms in these compounds does not render the claim indefinite (*see, e.g.*, M.P.E.P. § 2173.05(t)), in the interest of advancing prosecution, Applicants have amended claim 9 to state that the groups contain “from 8 to 30 carbon atoms.”

Applicants respectfully submit that the amendments obviate each reason for rejection proffered by the Office. Accordingly, withdrawal of this rejection is respectfully requested.

**B. Claims 12-15**

The Office has rejected claims 12-15 under 35 U.S.C. § 112, second paragraph, as allegedly being redundant because they do not further limit the claim. (Office Action, p. 3) Although claims 13 and 14 have been cancelled, Applicants respectfully traverse this rejection insofar as it applies to claims 12 and 15.

First, Applicant's note that this rejection is improper due to the failure to specifically set forth a basis for the rejection. Second, although the Office improperly fails to explain the basis for this rejection, based on the prosecution of the parent application, Applicants presume this rejection is due to the Office's contention in the parent application that “human keratin fibres” does not further limit the claims directed to “keratin fibres.” If that is the case, Applicants disagree. Claims 12 and 15 do in fact further define the “keratin fibres” of the claims on which they depend as “human keratin

fibres.” The further definition and claiming is consistent with the well-known fact that “keratin fiber” is a term that broadly encompasses human fibers as well as those of other “vertebrate animals” and furs of non-living animals. “Hawley’s Condensed Chemical Dictionary,” (14<sup>th</sup> Ed., 2001) p. 641 (attached at Exhibit 1). “Keratin” is defined broadly as an insoluble protein, and includes softer keratins, such as skin, wool, hair, and feathers, and harder types, such as nails, claws, and hoofs. See *id.* Thus “keratin fibers” is not limited to human fibers, and certainly not human hair.

For these reasons, Applicants respectfully request that this rejection be withdrawn.

**C. Claim 52**

Finally, the Office has rejected claim 52 as allegedly redundant because according to U.S. Patent No. 5,735,908, the polymers of claim 9 fall under the definition of those in claim 52. (Office Action, p. 3) Applicants disagree. Claim 52 is directed to **additional** cationic or amphoteric substantive polymers. Claim 9 is open-ended; therefore, the disclosed oxidizing composition may contain additional elements. Whether or not cationic or amphoteric substantive polymers fall within the “cationic amphiphilic polymers” of claim 9 is irrelevant. For this reason, Applicants respectfully request that this rejection be withdrawn.

**IV. Double Patenting**

The Office has stated that should claims 9 and 10 be found allowable, claims 12-15 will be objected to as being substantially duplicative of the allowed claims. (Office Action, p. 3). Although claims 13 and 14 have been cancelled, Applicants disagree and

respectfully traverse this rejection insofar as it applies to claims 12 and 15 for substantially the same reasons provided above, e.g., claims 12 and 15 define patentably distinct subject matter.

Again, Applicants submit that each claim further defines the keratin fibers for which the dye is prepared. Applicants have established that claims 12 and 15 differ from and, thus, are not substantial duplicates of the claims from which they depend. For these reasons, Applicants respectfully request that this objection to the claims be withdrawn.

**V. Rejection Under 35 U.S.C. § 102(b)**

The Office has rejected claims 9-15, 25, 36, 39, 52, and 71 under 35 U.S.C. § 102 as allegedly anticipated by U.S. Patent No. 5,135,748 to Zeigler *et al.* ("Zeigler"). (Office Action, p. 4.) Although claims 9, 12, 25, and 71 have been amended, claims 10-11 and 13-14 canceled, and claims 73 and 74 added, Applicants respectfully traverse this rejection insofar as it applies to the currently pending claims.

As has often been made clear by the Federal Circuit, anticipation requires that each and every claim limitation be met by a single reference. *Glaxo v. Novopharm, Inc.*, 34 U.S.P.Q.2d 1565 (Fed. Cir. 1995). Moreover, the reference must clearly and unequivocally disclose the claimed composition to one of ordinary skill in the art "without any need for picking, choosing and combining various disclosures." *In re Arkley*, 172 U.S.P.Q. 524, 526 (C.C.P.A. 1972).

The Office asserts that Example 1 of Zeigler discloses "a composition comprising Quadrisoft LM-200, which is a quaternized hydroxyethylcellulose polymer comprising a

fatty acid lauryl chain which contains 12 carbon atoms.” (Office Action, p. 4.) This rejection is obviated by the amendment adding “at least one oxidizing agent” to independent claim 9, as set forth above, as Zeigler does not disclose an oxidizing agent. Therefore, Zeigler cannot anticipate the amended claims. Accordingly, withdrawal of this rejection is respectfully requested.

**VI. Rejection Under 35 U.S.C. § 103**

The Office has also rejected claims 9-15, 25, 36, 39, 52, and 71 under 35 U.S.C. § 103 as allegedly obvious over FR 2,717,383 and its U.S. equivalent U.S. Patent No. 5,735,908 to Cotteret *et al.* (“Cotteret”). (Office Action, p. 4.) Although claims 9, 12, 25, and 71 have been amended, claims 10-11 and 13-14 canceled, and claims 73 and 74 added, Applicants respectfully traverse this rejection insofar as it applies to the currently pending claims.

To establish a *prima facie* case of obviousness, certain basic criteria must be met, including a suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, of the proposed modification or combination of references teachings. Also, there must be a reasonable expectation of success in the modification or combination. In the present case, the Office has not set forth a *prima facie* case of obviousness because the Office has not established that Cotteret would suggest the presently claimed invention to the skilled artisan nor does the art provide a reasonable expectation of success.

The Office asserts that Cotteret teaches the use of a hydroxyethylcellulose quaternary ammonium polymer having an alkyl group containing 12 carbon atoms

mixed with oxidizing agents for use in hair dyeing compositions. (Office Action at p. 5.)

The Office concedes that Cotteret does not provide a working example of the claimed polymer in a composition, but asserts that it would have been obvious to the skilled artisan to substitute the Quadrisoft LM 200 disclosed in the specification for the Mirapol which is combined with hydrogen peroxide in example 2. (*Id.*) Alternatively, the Office asserts that it would have been obvious to the skilled artisan to form a composition comprising only the oxidizing agent and polymer in view of Cotteret's disclosure that the two components may be combined to form a composition without the dye component. (*Id.*) Applicants respectfully disagree.

"Some motivation to select the claimed species or subgenus must be taught by the prior art." M.P.E.P. § 2144.08. Cotteret discloses a large genus of cationic and amphoteric substantive polymers, which includes the disclosure of numerous polymers by reference (col. 3, ln. 34 to col. 4, ln. 55). In contrast, the claimed invention is directed to a class of cationic amphiphilic polymers. It is well-known that not all "cationic and amphoteric substantive polymers" as taught in Cotteret are "cationic amphiphilic," as claimed. Likewise, not all "cationic amphiphilic polymers" are "cationic and amphoteric substantive polymers." Cotteret does not provide any guidance that would lead the skilled artisan to the particular polymers of the present invention. Indeed, the cationic amphiphilic polymers of the present claims are not even among the "especially preferred polymers" of Cotteret. (Col. 3, ln. 65 to col 4, ln. 55.) Moreover, as stated above, the Office concedes that there are no working examples using the presently claimed polymers. (Office Action at p. 5.) While the Office asserts that the skilled artisan could substitute the Quadrisoft LM 200 disclosed in the specification for the

Mirapol in example 2, the Office does not point to any suggestion in the reference that would lead the skilled artisan to select Quadrisoft LM 200 from the large genus of polymers disclosed for the substitution.

The Federal Circuit has repeatedly warned that the requisite motivation must come from the prior art, not applicant's specification. *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531-1532 (Fed. Cir. 1988) ("[t]here must be a reason or suggestion in the art for selecting the procedure used, other than the knowledge learned from the applicant's disclosure."). Using an applicant's disclosure as a blueprint to reconstruct the claimed invention from isolated pieces of the prior art contravenes the statutory mandate of section 103 of judging obviousness at the point in time when the invention was made. *See Grain Processing Corp. v. American Maize-Prods. Co.*, 840 F.2d 902, 907, 5 U.S.P.Q.2d 1788, 1792 (Fed. Cir. 1988).

Nothing, other than the present disclosure, provide the required motivation to arrive at the claimed invention. For example, the present specification teaches that the amphoteric substantive polymers act as thickeners and provide better localized application of the oxidation dye composition. (See specification at p. 2, ln. 15 to p. 3, ln. 6.) Cotteret does not provide any guidance or suggestion regarding this property. Thus, one skilled in the art would not be led to select the claimed polymers from the long list in Cotteret to achieve an oxidation dye composition with better localized application.

In the absence of a suggestion or motivation to arrive at the presently claimed invention, the art does not render the present claims obvious.



Additionally, the Office has not set forth any evidence of a reasonable expectation of success in making the proposed combination. At best, the prior art individually discloses various elements of the presently claimed invention. Only in hindsight after reviewing the present application could it have been obvious to one with the cited reference before her to have selected a particular cationic amphiphilic polymer from the disclosed cationic and amphoteric substantive polymers for combination with an oxidizing agent in the claimed manner with any reasonable expectation of success. The Office, however, may not pick and choose among isolated disclosures in references to defeat patentability of a claimed invention after seeing the blueprint the claimed invention provides. Such picking and choosing amounts to improper hindsight reconstruction and is prohibited. See *In re Fine*, 5 U.S.P.Q.2d 1596, 1600, 837 F.2d 1071, 1075 (Fed. Cir. 1988).

The Office has not provided any specific basis on which one of ordinary skill in the art would expect the particular cationic amphiphilic polymers of the claimed invention to be successfully combined with the oxidizing agent. The Office asserts that the disclosure teaches that the claimed polymers are interchangeable with those exemplified therein. (Office Action at p. 5.) However, as explained above, Cotteret merely teaches the claimed polymers as part of a much larger genus, not that the resulting composition will produce the same results as those exemplified. Without more, there is no expectation of success from the combination.

Accordingly as Applicants have established that the Office failed to set forth a *prima facie* case of obviousness, the rejection under 35 U.S.C. § 103(a) over Cotteret is improper and should be withdrawn.

**VI. Conclusion**

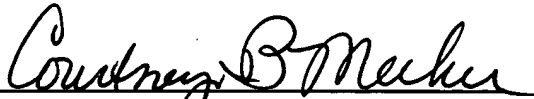
In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: June 27, 2005

By:   
Courtney B. Meeker  
Reg. No. 56,821

*Hawley's*  
**Condensed Chemical  
Dictionary**  
*Fourteenth Edition*

Revised by  
**Richard J. Lewis, Sr.**



JOHN WILEY & SONS, INC.

BEST AVAILABLE COPY

This book is printed on acid-free paper.



Copyright © 2001 by John Wiley & Sons, Inc., New York. All rights reserved.

Published simultaneously in Canada.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. (978) 750-8400, fax (978) 750-4744. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158-0012, (212) 850-6011, fax (212) 850-6008, E-mail: PERMREQ@WILEY.COM.

For ordering and customer service, call 1-800-CALL-WILEY.

***Library of Congress Cataloging-in-Publication Data:***

Condensed chemical dictionary.

Hawley's condensed chemical dictionary.—14th ed./ rev. by Richard J. Lewis, Sr. p. cm.

Includes index.

ISBN 0-471-38735-5 (cloth: acid-free paper)

1. Chemistry—Dictionaries. I. Title: Condensed chemical dictionary. II Hawley, Gessner Goodrich, 1905– III. Lewis, Richard J., Sr. IV. Title.

QD5 C5 2002

540".3--dc21

2001045614

Printed in the United States of America.

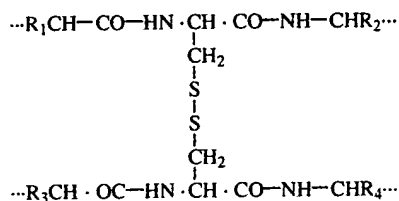
10 9 8 7 6 5 4 3 2

BEST AVAILABLE COPY

**Hazard:** A carcinogen. Toxic by ingestion, inhalation, and skin absorption. Manufacture and use have been prohibited.

**Use:** Insecticide, fungicide.

**keratin.** A class of natural fibrous proteins occurring in vertebrate animals and humans, they are characterized by their high content of several amino acids, especially cystine, arginine, and serine. They are generally harder than the fibrous collagen group of proteins. The softer keratins are components of the external layers of skin, wool, hair, and feathers, while the harder types predominate in such structures as nails, claws, and hoofs. The hardness is largely due to the extent of cross-linking by the disulfide bonds of cystine by the mechanism shown below:



Keratins are insoluble in organic solvents but do absorb and hold water. The molecules contain both acidic and basic groups and are thus amphoteric. **Use:** Tablet coatings that dissolve only in the intestines, foam extinguishers, protein hydrolyzates.

**keratinase.** A water-soluble, proteolytic enzyme having the ability to digest the keratin in wool and other forms of hair, converting a portion of it to a water-soluble form. It thus acts as a depilatory and is used in removing hair from pelts and hides, as well as from human skin. It is inactivated by heating to 100C.

**"Kerlone"** [Searle]. TM for betaxolol hydrochloride. **Use:** Drug.

**kernite.**  $Na_2B_4O_7 \cdot 4H_2O$ . A natural sodium borate found in Kern County, California.

**Properties:** Colorless to white, two good cleavages, luster vitreous to pearly. Mohs hardness 3, d 1.95. Noncombustible.

**Use:** Major source of borax and boron compounds.

**kerogen.** The organic component of oil shale, it is a bitumen-like solid whose approximate composition is 75-80% carbon, 10% hydrogen, 2.5% nitrogen, 1% sulfur, and the balance oxygen. It is a mixture of aliphatic and aromatic compounds of humic and algal origin and comprises a substantial proportion of the shale; after fractionating and refining, the oil is reported to yield 18% gasoline, 30% kerosene, 27% gas oil, 15% light lube oil, and 10% heavy lube oil.

**kerosene.** (kerosine).

CAS: 8008-20-6.

**Properties:** Water-white, oily liquid; strong odor. D 0.81, boiling range 180-300C, flash p 100-150F (37.7-65.5C), autoign temp 444F (228C). Combustion properties can be greatly improved by a proprietary hydrotreating process involving a selective catalyst.

**Derivation:** Distilled from petroleum.

**Hazard:** Moderate fire risk, explosive limits in air 0.7-5.0%. Toxic by inhalation.

**Use:** Rocket and jet engine fuel, domestic heating, solvent, insecticidal sprays, diesel and tractor fuels.

**ketal.** Organic compound produced by addition of an alcohol to a ketone. Analogous to acetal. See hemiketal.

**ketene.**

CAS: 463-51-4.  $H_2C=C=O$ .

**Properties:** Colorless gas; disagreeable odor. Readily polymerizes; cannot be shipped or stored in a gaseous state. Mp -151C, bp -56C.

**Derivation:** Pyrolysis of acetone or acetic acid by passing its vapor through a tube at 500-600C.

**Hazard:** Toxic by inhalation, strong irritant to skin and mucous membranes. TLV: TWA 0.5 ppm; STEL 1.5 ppm.

**Use:** Acetylating agent, generally reacting with compounds having an active hydrogen atom; reacts with ammonia to give acetamide. Starting point for making various commercially important products, especially acetic anhydride and acetate esters.

**ketimine.** A type or class of curing agent for epoxy resins that makes it possible to use very-high-solids content coatings in spray equipment. Reacts with epoxies very slowly and thus delays curing time, which prevents setting up of the resin during spraying operation. In presence of water or water vapor, ketimine breaks down to a polyamine and a ketone. Epoxy coatings cured with ketimine should not exceed a thickness of 10 mils.

**4-ketobenzotriazine.** (benzazimide; 4-keto-(3H)-1,2,3-benzotriazine).  $C_7H_4N_2O$  Bicyclic.

**Properties:** Tan powder. Mp 210C (decomposes).

Soluble in alkaline solutions and organic bases. **Use:** Organic synthesis.

**keto-enol tauterism.** A compound with isomers in equilibrium between the keto form  $-CH_2-CO-$  and the enol form  $-CH=C(OH)-$ . It occurs by migration of a hydrogen atom between a carbon atom and the oxygen on an adjacent carbon. See isomerization.

**$\alpha$ -ketoglutaric acid.** (2-oxopentanedioic acid).  $HOOCCH_2CH_2COCOHO$ .

**Properties:** Mp 113.5C. Soluble in water and alcohol. Important in amino-acid metabolism.

BEST AVAILABLE COPY